

AMENDMENTS TO THE CLAIMS

1. (previously presented) A data distribution apparatus comprising:
a distribution unit using packet communication to distribute, to a reception apparatus, data having a serial number attached thereto in streaming form;
an acceptance unit accepting a request for distribution of stream data preceding a predetermined serial number, from said reception apparatus; and
a transmission unit transmitting, upon the acceptance of said request for distribution, said stream data preceding said predetermined serial number in parallel with the distribution of data in said streaming form by said distribution unit.
2. (previously presented) The data distribution apparatus according to claim 1, further comprising a hold unit holding said stream data transmitted by said distribution unit for a predetermined period of time.
3. (previously presented) The data distribution apparatus according to claim 1, wherein said transmission unit transmits said stream data preceding said predetermined serial number in descending order of the serial number.
4. (previously presented) The data distribution apparatus according to claim 1, wherein said acceptance unit accepts said request for distribution including information about an amount of data requested to be distributed, from said reception apparatus, and
said transmission unit transmits said stream data preceding said predetermined serial number by said amount of data.
5. (previously presented) The data distribution apparatus according to claim 1, wherein said distribution unit distributes said data having the serial number attached thereto in streaming form to a multicast address,
said transmission unit transmits said stream data preceding said predetermined serial number to a unicast address of said reception apparatus from which said accepted request for distribution is provided.
6. (Currently amended) The data distribution apparatus according to claim 1, further comprising a monitor unit (202) monitoring a congestion state of data distribution by said distribution unit, wherein

when said monitor unit detects that there is the congestion state, said transmission unit stops or decelerates transmission of said stream data preceding said predetermined serial number, monitors whether recovery from said congestion state is made, and then controls transmission of said data.

7. (previously presented) A data distribution apparatus comprising:

a distribution unit using packet communication to simultaneously distribute identical data in streaming form to a plurality of addresses;

an acceptance unit accepting a request for distribution of said data from a reception apparatus;
and

a transmission unit transmitting, upon the acceptance of said request for distribution, in parallel with the distribution by said distribution unit to said plurality of addresses, data that is the same as the data being distributed by said distribution unit, to a unicast address of said reception apparatus from which said accepted request for distribution is provided, for a specific period of time.

8. (Currently amended) The data distribution apparatus according to claim 7, further comprising:

a notification unit receiving, from said reception apparatus from which said accepted request for distribution is provided, notification that the data distributed by said distribution unit (402) is received;
and

a stop unit stopping, upon the reception of said notification, the transmission to said unicast address of said reception apparatus.

9. (previously presented) A reception apparatus comprising:

a reception unit using packet communication to receive, from a data distribution apparatus, data having a serial number attached thereto in streaming form; and

a buffering unit storing, in buffer, when an address of a source of the packet received by said reception unit, a service identification number of said source and a service identification number of a destination are specific values communicated in advance to each other with said distribution apparatus and when an address of the destination is an address of said reception apparatus or a multicast address communicated to each other with said distribution apparatus, said packet received, so that no packet having the same serial number as the serial number attached to said packet is stored in said buffer.

10. (previously presented) The reception apparatus according to claim 9, further comprising:

a first distribution request unit making a request for distribution of said data to said data distribution apparatus; and

a second distribution request unit making a request for stream data preceding a serial number of a firstly received packet, after said request for distribution is made, to said data distribution apparatus.

11. (previously presented) The reception apparatus according to claim 10, wherein said second distribution request unit makes notification of an amount of requested data in making said request for said stream data preceding said serial number of said firstly received packet.

12. (previously presented) The reception apparatus according to claim 10, wherein said second distribution request unit makes notification of a type of a receivable protocol in making said request for said stream data preceding said serial number of said firstly received packet.

13. (previously presented) The reception apparatus according to claim 9, further comprising:
a first distribution request unit making a request for distribution of said data to said data distribution apparatus; and
a notification unit making, when a first multicast packet is received from said data distribution apparatus after said request for distribution is made, notification that said first multicast packet is received, to said data distribution apparatus.

14. (previously presented) A data distribution method for distributing data from a data distribution apparatus to a reception apparatus, comprising:
a distribution step for distributing by said data distribution apparatus, using packet communication, data having a serial number attached thereto in streaming form;
an acceptance step for accepting by said data distribution apparatus, a request for distribution of said data distributed in said streaming form and preceding a predetermined serial number, from said reception apparatus; and
a transmission step for transmitting, by said data distribution apparatus, upon receiving said request for distribution, in parallel with the distribution of said data in said streaming form in said distribution step, said data distributed in said streaming form and preceding said predetermined serial number.

15. (previously presented) A data distribution method for distributing data from a data distribution apparatus to a plurality of addresses, comprising:

a distribution step for simultaneously distributing by said data distribution apparatus, using packet communication, identical data in streaming form to said plurality of addresses;

an acceptance step for accepting by said data distribution apparatus, a request for distribution of said data, from a reception apparatus; and

a transmission step for transmitting, by said data distribution apparatus, upon accepting said request for distribution, in parallel with the distribution to said plurality of addresses in said distribution step, data that is the same as the data being distributed in said distribution step, to a unicast address of said reception apparatus from which said accepted request for distribution is provided, for a specific period of time.

16. (previously presented) A data distribution program product for a computer to execute a method of distributing data from a data distribution apparatus to a reception apparatus, said method comprising:

a distribution step for distributing by said data distribution apparatus, using packet communication, data having a serial number attached thereto in streaming form;

an acceptance step for accepting by said data distribution apparatus, a request for distribution of said data distributed in said streaming form and preceding a predetermined serial number, from said reception apparatus; and

a transmission step for transmitting, by said data distribution apparatus, upon receiving said request for distribution, in parallel with the distribution of the data in said streaming form in said distribution step, said data distributed in said streaming form and preceding said predetermined serial number.

17. (previously presented) A data distribution program product for a computer to execute a method of distributing data from a data distribution apparatus to a plurality of addresses, said method comprising:

a distribution step for simultaneously distributing by said data distribution apparatus, using packet communication, identical data in streaming form to said plurality of addresses;

an acceptance step for accepting by said data distribution apparatus, a request for distribution of said data, from a reception apparatus; and

a transmission step for transmitting, by said data distribution apparatus, upon accepting said request for distribution, in parallel with the distribution to said plurality of addresses in said distribution step, data that is the same as the data being distributed in said distribution step, to a unicast address of said reception apparatus from which said accepted request for distribution is provided, for a specific period of time.